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EXAMINER
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SCHNEIDER, CRAIG M

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* RICHARD C. FUKSA and JUN ZHU

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Appeal 2009-009839  
Application 10/752,651  
Technology Center 3700

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Before WILLIAM F. PATE, III, STEFAN STAICOVICI, and  
FRED A. SILVERBERG, *Administrative Patent Judges*.

SILVERBERG, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

## STATEMENT OF THE CASE

Richard C. Fuksa and Jun Zhu (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-8. We have jurisdiction under 35 U.S.C. § 6(b). Appellants' counsel presented oral argument on February 10, 2011.

We REVERSE.

## THE INVENTION

Appellants' claimed invention is directed to a valve pin insert in a polytetrafluoroethylene (PTFE) material valve plate (Spec. 1: para. [0003]).

Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A valve pin insert in combination with a valve plate, said pin insert having a body inserted into said valve plate, wherein the body has a lower shank at one end of the body and an upper shank adjacent to the lower shank, the lower shank being of a first diameter and the upper shank being of a second diameter, the first diameter being less than the second diameter and wherein between the lower shank and the upper shank of the body an undercut shoulder forms a recess opening in the direction toward the lower shank, the recess forming a tooth that shears material of the valve plate as the pin is inserted into a hole in the valve plate and wherein said valve pin insert has an insert position, wherein when in said insert position said upper and lower shank are disposed in said valve plate and said valve pin insert is fixedly connected to said valve plate.

### THE REJECTIONS

The following rejections by the Examiner are before us for review:

1. Claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wise (US 3,621,868, issued Nov. 23, 1971) in view of Miller (US 6,267,527 B1, issued Jul. 31, 2001).
2. Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wise in view of Miller, and further in view of Kawaguchi (US 2003/0181560 A1, issued Sep. 25, 2003).
3. Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wise in view of Miller, and further in view of Malloy (US 4,146,206, issued Mar. 27, 1979).
4. Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wise in view of Miller, and further in view of Runge (US 4,182,217, issued Jan. 8, 1980).
5. Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wise in view of Miller, and further in view of Kindt (US 2,221,141, issued Nov. 12, 1940).
6. Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wise in view of Miller, and further in view of Hinkel (US 6,435,758 B1, issued Aug. 20, 2002).
7. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wise in view of Miller, and further in view of Applicants' Exhibit A<sup>2</sup>.

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<sup>2</sup> Submitted by Appellants as part of an Information Disclosure Statement (IDS) on May 18, 2004.

## ISSUE

The issue before us is whether the Examiner erred in concluding that the combined teachings of Wise and Miller would have led a person having ordinary skill in the art to an undercut shoulder that forms a recess opening in the direction toward the lower shank, wherein the recess forms a tooth that shears material of the valve plate as the pin is inserted into a hole in the valve plate, as called for in independent claim 1 (App. Br. 7).

## ANALYSIS

### *Rejection of claims 1 and 2*

The Examiner found (1) that Wise does not describe an undercut shoulder that forms a recess opening in the direction toward the lower shank, wherein the recess forms a tooth that shears material (Ans. 3-4), (2) that Miller describes in Figure 4B an undercut shoulder that forms a recess, wherein the recess forms a tooth that shears material (Ans. 4), (3) that Miller describes that the “dowel can be constructed of metal” (Ans. 8), and (4) that “if a metal dowel was inserted into a wood receiving structure that it would shear the wood as it is inserted” (*id.*).

The Examiner concluded that “it would have been obvious . . . to utilize the dowel construction of Miller onto the valve pin of Wise” (Ans. 4).

Appellants contend that the concave step 17 described by Miller does not form a tooth that shears material as the dowel is inserted in the components 30 and 34 (App. Br. 7).

Miller describes a dowel 10 having a step portion 17, which may be shaped to increase the strength to prevent breakage if the dowel 10 experiences unusually high tensile or shear forces, wherein the step portion 17 may be recessed or concave as shown in Figure 4B (col. 3, ll. 51-67).

Miller describes that during use, the dowel 10 is pressed into openings 32, 36 (col. 5, ll. 26-28; 45-47), wherein the dowel 10 is held tightly in openings 32, 36 by frictional forces exerted on the dowel's outer side walls by the opening's 32, 36 inner side walls (col. 5, ll. 55-59).

Miller is silent as to whether the concave step 17 forms a tooth that shears material as the dowel is pressed into openings 32, 36. As such, it becomes incumbent upon the Examiner to provide an adequate basis in fact and/or technical reasoning that would support a finding that Miller's concave step 17 forms a tooth that shears material as the dowel is pressed into openings 32, 36. The Examiner (1) opined, *inter alia*, that since Miller's dowel 10 can be made of metal, it would shear wood as it is inserted in a wood receiving structure (Ans. 8), and (2) based the conclusion of obviousness on the findings in Miller (Ans. 4). We find that the Examiner's statement regarding Miller's dowel 10 shearing wood is a conclusory statement not supported by Miller's actual disclosure, and is, thus, based upon speculation. We conclude that a rationale based upon an unsupported fact finding does not provide a sound basis for a conclusion of obviousness. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”) *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967) (“The legal conclusion of obviousness must be supported by facts. Where the legal conclusion is not supported by facts it cannot stand.”)

Thus, we are constrained to reverse the rejection of independent claim 1 and dependent claim 2.

*Rejection of claims 3-8*

The Examiner has not relied on Kawaguchi, (Ans. 4), Malloy (Ans. 5), Runge (*id.*), Kindt (Ans. 6), Hinkel (*id.*) or Applicants' Exhibit A (*id.*) for any teaching that would remedy the deficiency in Wise and Miller as to independent claim 1, from which claims 3-8 depend.

Thus, for the same reasons set forth *supra* regarding the rejection of independent claim 1, we reverse the rejection of dependent claims 3-8.

CONCLUSION

The Examiner has erred in concluding that the combined teachings of Wise and Miller would have led a person having ordinary skill in the art to an undercut shoulder that forms a recess opening in the direction toward the lower shank, wherein the recess forms a tooth that shears material of the valve plate as the pin is inserted into a hole in the valve plate, as called for in independent claim 1.

DECISION

The decision of the Examiner to reject claims 1-8 is reversed.

REVERSED

Appeal 2009-009839  
Application 10/752,651

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